

Towards the end of 1892 his health began gradually to fail, and he had occasional attacks of severe illness, which confined him to his bed for weeks together, each leaving him weaker than before. One of these attacks occurred on 1895 January 8, but he seemed to be getting better, when on January 21 he began to grow rapidly weaker, and died about six o'clock on the evening of Saturday, January 26. He was interred at Cambridge on the following Friday, the funeral service taking place in Trinity College, when the large assemblage of senior members of the University, of the representatives of Governments and societies, and friends from a distance, testified to the respect and estimation in which he was held.

In 1863 he married Susan, daughter of Robert Moline, of Greenwich. His wife and two children survive him. His valuable mathematical library has been presented by Mrs. Cayley to Trinity College and Newnham College. J. W. L. G.

EDWARD JOHN COLLINGWOOD was born on 1815 February 4, at Chirton House, North Shields. His residences were Lilburn Tower and Chirton House, but he sold the latter some years ago. He built an observatory at Lilburn Tower about the year 1852, in which he placed a  $6\frac{1}{2}$ -inch refractor, equatorially mounted, and a 4-inch transit instrument; but his eyesight failed shortly after the instruments were mounted, and he was unable to do much astronomical work.

He married in 1842 Anna, daughter of the late Arthur Burdett, of Co. Tipperary and King's County, by whom he had issue three sons and two daughters, all of whom survive him. He died at Lilburn Tower on 1895 February 20. Mrs. Collingwood died in 1879.

He was elected a Fellow on 1851 February, but contributed no papers to the Society.

[For these particulars the Council is indebted to his son, Mr. Edward J. Collingwood.]

RICHARD DUNKIN was born at Truro on 1823 June 9. He was the fourth and youngest son of Mr. William Dunkin, who was for nearly thirty years one of the established computers of the old edition of the *Nautical Almanac*, and afterwards a member of the staff of the *Nautical Almanac* office, on its reorganisation in 1831 under the direction of Lieutenant Stratford, R.N., F.R.S. R. Dunkin received his general education at private schools at Truro and Camden Town, London, and finally at a well-known French school at Guines, near Calais, where he remained until the death of his father in 1838 July. In the following month, August 21, through the recommendation of Mr. Davies Gilbert, F.R.S., a Past President of the Royal Society, and Lieutenant Stratford, he and his elder brother were engaged by the Astronomer Royal for special employment in a new department of the Royal Observatory, then recently established

by the late Sir G. B. Airy for the systematic reduction of all the planetary and lunar observations made at Greenwich between the years 1750 and 1830. Richard Dunkin was employed nine years on these laborious calculations, first on the planetary section, and after 1841 on the lunar sections of this important work, the whole of which was carried on in the Octagon Room by a large number of computers. In 1847 August he was appointed an assistant in the *Nautical Almanac* office, on the staff of which he continued a member thirty-six years, retiring in 1883 on a Civil Service pension as a first-class assistant. He had thus an unbroken official service of forty-five years.

When in 1838 R. Dunkin joined the computing staff at the Royal Observatory, the office hours in this special department were excessively long, usually from 8 A.M. to 8 P.M., with only a relaxation of one hour for luncheon at midday. In 1839 the computing-day was reduced to eight hours. The close application required during eleven hours, and even eight hours, without a chance of any variation of work, was almost too great a strain on the nerves of a delicate youth of fifteen. It was, therefore, no wonder that this severe sedentary occupation, coming so soon after the comparative freedom of school-life, unfavourably affected both his bodily and mental health, causing at one time much anxiety to his relatives. There can be no doubt that it was owing principally to this close confinement to the desk in his early years, at a critical period of his life, and also partly on account of his naturally reserved and retiring disposition, that he never felt disposed to undertake any astronomical calculations outside his office, fully believing that it was necessary to reserve all his strength strictly for his work at Verulam Buildings. For many years, however, he took a considerable interest in astronomical questions, and in the general progress of the Society, although he never contributed a paper to its Proceedings. He was also well-informed on several other branches of science, having some acquaintance with experimental chemistry and photography, and also of botany and its scientific classifications, and he had a fair knowledge of general scientific history and literature. He had a great love for French poetry, a taste he acquired during his school-days at Guines, and he was also gifted with a remarkable memory for past events. All these pursuits afforded him a most agreeable pastime during the leisure hours of a considerable portion of his life, but more especially between the years 1848 and 1861.

In the autumn of 1884, about a year after his retirement from the *Nautical Almanac* office, Mr. R. Dunkin went to reside at Truro, in the house in which he was born. Here he passed the remainder of his life in the quiet enjoyment of the study of his favourite subjects, so far as his declining health permitted. During his later years he also took a great personal interest in floriculture, and was very successful in the cultivation of many choice specimens of flowers. He was never married. For a

long time he had been subject to an occasional partial failure of the heart's action. From these attacks he generally soon recovered, but after only a few days' illness from one more severe than usual, aggravated by the intensely cold weather of the winter of 1894-95, he passed away peacefully on the morning of 1895 February 19, in the seventy-second year of his age. He was elected a Fellow of the Society on 1851 June 13. E. D.

SIR CYRIL C. GRAHAM, of Kirkstall, was born in 1834. In 1874 he married Louisa Frederica, daughter of the late Rev. Lord Charles Hervey, D.D. Early in 1857 he made a long journey into the higher and less known regions of the Nile, and was rewarded by the discovery of several inscriptions of value. Next he travelled very carefully over the greater part of Palestine and much of Syria. In August 1857 he made explorations of great interest in the desert east of the Haurán and in the land of Bashan, where he discovered very curious inscriptions.

Respecting this last expedition he communicated valuable papers to the Royal Geographical and Asiatic Societies, of both which he was a member.

For the Transactions of the Royal Society of Literature he wrote a further paper on "Additional Inscriptions from the Haurán and the Eastern Desert of Syria," which was edited with a preface and notes by John Hogg, London, 1859.

In 1860-61 he was attached to Lord Dufferin's Mission in Syria (having previously travelled with him in that country in the autumn of 1859) as private secretary. In respect of his services in this capacity Lord Dufferin thus expressed himself: "At the expiration of about nine months our task was successfully terminated; the Constitution then drawn up has ever since rendered the Lebanon the best governed territory in the Turkish possessions. To these results he [Sir Cyril] powerfully contributed. . . . His abilities were certainly extraordinary. He had a peculiar talent for languages, and a most remarkable memory. As for his engaging qualities, they were innumerable."

In 1870-71 he went on behalf of the Hudson's Bay Company on a special mission to Canada and Hudson's Bay Territory to negotiate arrangements between the Company and the Government of the Dominion.

In 1873 Sir Cyril travelled in Russia, from Archangel to Astrakhan, and from the White Sea to the borders of the Kaspian, passing homewards through Daghistan and Georgia. Here, in the Caucasus, his attention was turned to the peculiarities of the Lesghian or Avâr language, on which he communicated a paper of great value to the Royal Asiatic Society in 1881.

In 1875-77 he was Lieutenant-Governor of Grenada in the West Indies, where he succeeded in bringing about an important change in the Constitution, which had previously been found unsatisfactory in its working.